REMARKS

The Applicants would like to thank the Examiner for the Office Action of March 4, 2010.

Claims 1, 3, 5-10 and 12-26 are pending in the application. Claims 1, 3, 7, 12, and 17 have been amended. Specifically, the limitations of Claim 2 have been incorporated into Claim 1. Also, Claims 2, 4 and 26 have been cancelled. Favorable reconsideration of the application, as amended, is respectfully requested.

Rejections Under 35 U.S.C. § 112, 1st paragraph

Claims 1-10 and 12-26:

Claims 1-10 and 12-26 all stand rejected under 35 U.S.C. § 112, 1st paragraph as failing to comply with the written description requirement. In particular, it is argued by the Action that the negative limitation "without pressure regulation between ..." lacks support in the specification. This language has been removed from the claims at issue thereby overcoming this rejection.

Claims 21, 22, 24, and 25:

Claims 21, 22, 24, and 25 also stand rejected under 35 U.S.C. § 112, 1st paragraph as failing to comply with the written description requirement. In particular, it is argued in the limitation of "wherein the standard level is obtained by a previously conducted process of fixing the aperture ..." is not supported in the specification. It is believed that this limitation is specifically articulated and illustrated in Fig. 4 and paragraph [0072] and those that follow. In particular, this point is emphasized in the description of S4 and the "fix". Also, similarly this principle is further illustrated in Fig. 14 and paragraph [0133] ff. In particular, this point is emphasized in the description of S46 and the "fix".

These portions of the specification (as well as others) clarify that the standard pressure change characteristics are obtained before verification. See, for example, Figs 5 and 15. Also, instructive are paragraphs [0072], [0079], [0133], [0145]. The order of process steps being described generally, by way of example, in the sequence of Figs 4 and 5 as well as Figs 14 and 15.

For example, the standard pressure change characteristics that are obtained in Fig. 4 are used at step 32 of Fig. 5. Also, the standard pressure change characteristics that are obtained in Fig. 14 are used at step 74 of Fig. 15.

The applicant's attorney respectfully suggests that the limitations in question are supported in the specification. Accordingly, applicants request that this ground of rejection be withdrawn.

Rejections Under 35 U.S.C. § 112, 2nd paragraph

Claims 1-10 and 12-26:

Claims 1-10 and 12-26 all stand rejected under 35 U.S.C. § 112, 2nd paragraph as being indefinite for failing to point out and distinctly claim the invention. The applicant's attorney has addressed this issue by removing the language referring to "without pressure regulation between the flow control component and the pressure detector". This language having been removed from the claims at issue and thereby is believed to overcome this rejection.

Rejections Under 35 U.S.C. § 102 & 103

All of the claims are further rejected, variously, under 35 U.S.C. § 102 or 35 U.S.C. § 103 as being unpatentable over by *Ollivier* (USPN 6,450,200) or *Wilmer* (USPN 5,865,205) or combinations thereof.

The Applicants have amended **Claims 1, 7, 12, & 17** to include the following limitations (or similar language) "detecting a pressure of the fluid which flows into or flows from the accumulator" AND by "fixing an aperture of the flow control valve mechanism at a selected aperture opening by fixing the valve driving signal" AND "measures changes in the pressure using the pressure detector while the channel is closed by the first opening and closing valve, wherein the aperture remains fixed at the selected aperture opening during the pressure change measurement" (e.g., Claim 1). This combination defines some unique properties and overcomes some shortcomings in the cited art.

The above combination of limitations are significant because they are neither anticipated by, or suggested by, or otherwise supported by *Ollivier*, *Wilmer* or any combination thereof.

Of particular significance is the need for *Ollivier's* pressure measurement to occur while the first valve is closed (see, the Action at page 18, line 2-3 and *Ollivier* at 5:60-65). This is required due to the nature of *Ollivier's* peculiar architecture because "*Ollivier* employs a pressure regulator (16) upstream of the control valve (22), the inlet pressure at the control valve (22) does not change while the valve is closed, and the aperture size therefore would remain constant" (see, the Action at page 18, line 3-7). Such an implementation results in a non-functional device, unable to "measure changes in the pressure" as claimed in the present invention. The reason is simple, if the above conditions are true (the pressure remaining constant) it becomes impossible "measure changes in the pressure" (e.g., Claim 1).

Also, when the mass flow control valve 22 and pressure regulator 16 are both under control, such as when, the aperture of the mass control valve 22 is not fixed and the pressure regulator 16 affects the pressure of the fluid, then even if the pressure measurement shows that there is a difference between the measured pressure change and the standard pressure change, it is not clear whether the difference is caused by the mass flow control valve 22 or the pressure regulator 16, and further it is not clear whether the difference is caused by inaccuracy in the mechanical operation of the mass flow control valve 22 or difference in the flow signal S1 of the mass flow detection means of the mass flow control valve 22. This is real problem.

However, in the claimed configuration, the pressure detecting means 46 is capable of detecting the pressure of the fluid coming in and out of the tank main unit 50 while the fluid is only defined by the aperture opening of the flow control valve 20. Also, the pressure detecting means 46 detects the pressure while the aperture opening of the flow control valve 20 is fixed. Accordingly, the claimed configuration is capable of detecting the difference in the signal S1 of the mass flow detection means. These characteristics and properties are present in all of the independent Claims 1, 7, 12, & 18.

This structural distinction is defines a significant structural distinction from the cited art and therefore supports an argument in favor of patentability.

Comments Regarding Claim 26

Claim 26 is cancelled requiring no further discussion of this claim.

Allowability of Rejected Claims

Thus, having several limitations not taught or suggested by *Ollivier* and *Wilmer*, claims 1, 7, 12, and 17 are believed to be allowable as amended.

The remaining rejected Claims are dependent on base claims 1, 7, 12, and 17 and also feature adding further limitations, and are therefore also allowable. Therefore, for at least these reasons, the Applicants submit that Claims 1, 3, 5, 6, 8-11, 13-16, and 18-25 are all allowable over the cited art.

Therefore, Applicants submit that the all pending claims are allowable over the cited art.

As set forth in the remarks above, the Applicants believe that all claims currently pending are in condition for allowance, and should now be allowed. Should the Examiner believe that a telephone conference would expedite the prosecution of this application, the undersigned can be reached at the telephone number set out below.

Respectfully submitted,
BEYER LAW GROUP LLP

/Francis T. Kalinski II/
Francis T. Kalinski II
Reg. No. 44,177

P.O. Box 1687
Cupertino, CA 95015-1687
408-255-8001